

XG-FVI-500 AHRI CERTIFIED RATING POINTS

RADIATED AND DISCHARGE SOUND - PSC MOTOR - FAN ONLY HEATING

OCTAVE BAND SOUND POWER, Lw, dB														
Case-Inlet Size	CFM	Discharge Ps	RADIATED SOUND FAN ONLY						DISCHARGE SOUND FAN ONLY					
			2	3	4	5	6	7	2	3	4	5	6	7
1-06	270	0.25	65	60	52	45	42	41	59	56	52	50	46	41
2-08	440	0.25	63	58	48	41	37	35	58	53	53	52	47	40
3-10	780	0.25	66	62	55	49	43	44	65	61	58	57	53	49
4-12	1000	0.25	70	68	62	62	53	53	69	67	59	63	59	56
5-14	1200	0.25	66	61	58	50	49	48	60	52	59	57	54	53
6-16	1800	0.25	76	73	67	63	57	56	73	70	67	69	63	64
7-16	2800	0.25	78	75	73	72	66	64	81	78	76	75	72	74

RADIATED AND DISCHARGE SOUND - PSC MOTOR - PRIMARY AIR ONLY COOLING

OCTAVE BAND SOUND POWER, Lw, dB														
Case-Inlet Size	CFM	Min ΔPs	ΔPs = 1.5 in. wg.											
			RADIATED SOUND						DISCHARGE SOUND					
			2	3	4	5	6	7	2	3	4	5	6	7
1-06	400	0.16	56	50	43	38	34	34	62	54	51	48	45	45
2-08	700	0.15	59	52	43	39	34	29	67	59	52	53	49	45
3-10	1100	0.16	63	54	50	47	41	35	69	62	57	56	53	50
4-12	1600	0.12	70	62	55	51	48	45	77	69	63	62	56	54
5-14	2100	0.16	66	61	52	48	43	36	73	67	61	61	58	52
6-16	2800	0.16	73	67	62	58	54	50	80	74	68	63	61	60
7-16	2800	0.16	73	68	65	63	58	55	81	76	64	62	61	60

PERFORMANCE NOTES

- 1) Radiated sound is the noise transmitted through the unit casing
- 2) Discharge sound is noise emitted from unit discharge into downstream ductwork
- 3) Sound power levels expressed in decibels, (dB) re 10⁻¹² Watts
- 4) Min ΔPs is the min. operating pressure requirement of the unit with the damper full open and is the static pressure drop from the unit inlet to the unit discharge
- 5) Performance data based on laboratory tests conducted in accordance with ASHRAE 130-2016 and AHRI 880-2017
- 6) Discharge sound power levels include duct end reflection corrections per AHRI Standard 880-2017
- 7) Sound performance based on units lined with standard dual density fiberglass insulation
- 8) Discharge (external) static pressure is 0.25" w.g. for all cases

PARALLEL FAN POWERED
XG-FVI-500 VARIABLE VOLUME

XG-FVI RADIATED AND DISCHARGE SOUND - PSC MOTOR - FAN ONLY HEATING

PARALLEL FAN POWERED

XG-FVI-500 VARIABLE VOLUME

OCTAVE BAND SOUND POWER, Lw, dB																
Case-Inlet Size	CFM	Discharge Ps	RADIATED SOUND FAN ONLY							DISCHARGE SOUND FAN ONLY						
			2	3	4	5	6	7	NC	2	3	4	5	6	7	NC
1-06	230	0.25	65	58	51	43	40	41	29	55	52	48	47	43	38	<15
	250		65	59	52	44	41	41	29	58	55	51	50	45	40	<15
	270		65	60	52	45	42	41	30	59	56	52	50	46	41	<15
	290		66	61	53	46	43	42	31	60	57	53	51	47	42	15
	310		66	61	54	47	44	43	31	60	57	53	51	47	42	15
2-08	380	0.25	61	57	47	41	37	35	26	57	52	51	51	45	39	<15
	410		62	57	47	41	37	35	26	57	52	52	51	46	39	<15
	440		63	58	48	41	37	35	28	58	53	53	52	47	40	<15
	470		63	58	48	42	38	36	28	58	53	53	52	47	41	<15
	500		64	59	49	42	38	36	29	59	54	54	53	48	42	16
3-10	580	0.25	60	58	51	45	38	39	28	60	57	52	49	48	42	>15
	680		63	61	53	47	40	41	31	63	60	57	55	50	46	18
	780		66	62	55	49	43	44	32	65	61	58	57	53	49	18
	880		67	63	56	50	44	45	34	68	62	59	60	57	54	19
	980		68	65	57	51	41	45	36	70	64	60	61	58	57	21
4-12	700	0.25	64	63	58	56	48	46	34	64	62	56	55	54	50	19
	850		66	65	60	58	50	49	36	66	64	58	56	56	52	21
	1000		70	68	62	62	53	53	39	69	67	59	63	59	56	25
	1150		70	69	62	63	54	54	40	70	68	60	63	60	57	26
	1300		72	71	64	66	56	57	42	71	70	61	62	62	59	29
5-14	1000	0.25	64	57	53	45	43	42	28	62	59	58	55	52	50	15
	1100		67	60	57	49	48	47	32	59	61	58	56	53	52	18
	1200		66	61	58	50	49	48	33	60	52	59	57	54	53	19
	1300		69	62	59	51	50	49	34	61	62	60	58	55	54	19
	1400		70	64	61	52	51	50	36	67	66	62	60	58	57	24
6-16	1600	0.25	74	72	66	62	56	55	35	69	66	64	61	59	59	24
	1700		75	72	66	62	56	55	36	71	68	66	64	61	61	26
	1800		76	73	67	63	57	56	40	73	70	67	69	63	64	29
	1900		77	74	67	64	58	57	43	74	71	67	68	64	64	30
	2000		77	74	68	64	58	57	45	74	71	68	68	65	65	30
7-16	2600	0.25	77	74	71	69	62	61	47	79	76	75	73	70	73	36
	2700		78	74	72	70	64	62	48	80	77	46	74	71	74	37
	2800		78	75	73	72	66	64	49	81	78	76	75	72	74	38
	2900		79	76	74	72	66	65	50	82	78	76	76	73	74	38
	3000		80	76	75	73	67	66	51	82	79	77	76	74	74	39

- 1) AHRI certified data is highlighted while all other data are application ratings
- 2) Radiated sound is the noise transmitted through the unit casing
- 3) Sound power levels expressed in decibels, (dB) re 10⁻¹² Watts
- 4) Min ΔPs is the minimum operating pressure requirement of the unit with the damper full open and is the static pressure drop from the unit inlet to the unit discharge
- 5) Performance data based on laboratory tests conducted in accordance with ASHRAE 130-2016 and AHRI 880-2017
- 6) NC values are calculated using attenuation credits outlined in AHRI 885-2008 Appendix E
- 7) Blank spaces indicate Minimum Ps if unit exceeds the ΔPs across the unit
- 8) Sound performance based on units lined with standard dual density fiberglass insulation
- 9) Discharge (external) static pressure is 0.25" w.g. for all cases
- 10) Discharge sound power levels include duct end reflection corrections per AHRI Standard 880-2017

XG-FVI RADIATED SOUND - PSC MOTOR - PRIMARY AIR ONLY COOLING

OCTAVE BAND SOUND POWER, Lw, dB																							
Case-Inlet Size	CFM	Min ΔPs	ΔPs = 0.50 in. wg.							ΔPs = 1.0 in. wg.							ΔPs = 1.5 in. wg.						
			2	3	4	5	6	7	NC	2	3	4	5	6	7	NC	2	3	4	5	6	7	NC
1-06	300	0.13	48	40	33	29	24	24	<15	54	48	39	36	32	30	15	55	49	41	37	32	33	16
	350	0.14	50	42	35	30	26	26	<15	55	49	41	37	33	31	17	56	50	42	37	33	33	17
	400	0.16	51	44	38	32	28	29	<15	55	50	42	37	34	32	18	56	50	43	38	34	34	18
	450	0.18	52	46	40	33	29	29	<15	56	51	46	41	35	33	20	56	51	45	41	35	34	19
	500	0.19	53	47	41	35	30	30	<15	57	52	46	43	36	33	20	57	52	49	42	36	34	20
2-08	500	0.12	51	43	36	30	23	25	<15	55	49	40	35	30	27	16	56	49	41	36	31	29	17
	600	0.13	52	45	39	33	25	27	<15	57	51	42	37	32	28	19	58	51	42	37	33	29	19
	700	0.15	53	48	42	35	27	28	15	58	52	43	38	33	28	20	59	52	43	39	34	29	21
	800	0.16	54	50	44	38	29	30	18	59	54	45	39	34	29	22	60	54	45	40	35	30	22
	900	0.17	56	53	48	42	32	33	22	59	56	49	43	35	29	25	61	55	47	42	35	30	24
3-10	700	0.12	52	44	40	37	29	21	<15	60	50	45	43	37	32	22	61	52	47	45	39	34	23
	900	0.13	54	46	42	39	31	23	15	62	51	46	45	38	33	25	62	53	48	46	39	34	25
	1100	0.16	57	50	45	42	34	29	19	63	52	47	46	40	34	26	63	54	50	47	41	35	26
	1300	0.17	62	51	48	44	32	24	25	64	55	54	49	43	35	29	64	56	55	49	43	36	30
	1500	0.18	63	53	49	46	32	26	26	65	56	54	50	44	36	36	66	57	55	51	45	37	31
4-12	1000	0.10	55	50	44	42	32	27	16	64	57	50	46	44	42	28	66	59	52	48	46	44	31
	1300	0.11	57	55	49	45	36	28	24	66	58	52	48	45	42	30	68	60	54	50	47	44	32
	1600	0.12	65	56	51	47	43	39	29	68	60	54	50	47	43	32	70	62	55	51	48	45	35
	1900	0.13	68	58	53	46	41	37	32	71	62	56	52	49	45	36	72	64	57	53	50	47	37
	2200	0.14	69	59	54	47	42	38	35	73	61	56	52	49	43	39	75	64	58	54	50	46	41
5-14	1300	0.11	52	47	38	34	25	26	15	61	57	48	44	39	32	26	63	58	50	46	41	34	27
	1700	0.14	57	50	41	36	29	30	18	63	59	50	46	41	34	28	65	60	52	48	43	36	29
	2100	0.16	59	53	45	40	34	32	21	64	59	50	46	41	34	28	66	61	52	48	43	36	31
	2500	0.18	62	52	44	38	31	33	25	68	62	53	49	44	36	32	69	63	55	51	46	37	31
	2900	0.20	64	54	47	40	33	36	27	69	64	54	50	44	38	34	71	65	57	52	47	39	36
6-16	1800	0.12	60	48	44	42	37	30	22	67	62	57	53	49	46	32	68	64	59	56	52	49	34
	2300	0.14	64	57	51	47	42	36	28	70	64	59	54	50	47	35	71	66	61	57	53	49	37
	2800	0.16	69	63	56	51	47	42	34	72	66	60	55	51	47	38	73	67	62	58	54	50	39
	3300	0.18	71	64	59	53	48	42	36	74	68	63	58	52	48	41	76	69	64	59	55	51	44
	3800	0.20	74	67	61	56	50	46	41	78	71	66	61	55	52	45	79	71	66	61	56	54	47
7-16	1800	0.12	62	53	51	51	44	39	25	64	58	54	53	49	46	28	67	63	59	58	53	50	30
	2300	0.13	65	58	55	54	48	43	30	69	64	61	59	54	51	36	71	66	63	62	56	54	39
	2800	0.16	69	62	59	57	51	46	32	72	66	63	61	55	52	38	73	68	65	63	58	55	42
	3300	0.18	71	65	62	58	53	48	37	74	68	65	62	56	52	41	75	69	67	64	59	55	43
	3800	0.20	74	68	64	60	55	49	40	76	70	67	64	58	53	43	77	71	68	65	61	56	44

1) AHRI certified data is highlighted while all other data are application ratings
 2) Radiated sound is the noise transmitted through the unit casing
 3) Sound power levels expressed in decibels, (dB) re 10⁻¹² Watts
 4) Min ΔPs is the minimum operating pressure requirement of the unit with the damper full open and is the static pressure drop from the unit inlet to the unit discharge
 5) Performance data based on laboratory tests conducted in accordance with ASHRAE 130-2016 and AHRI 880-2017

6) NC values are calculated using attenuation credits outlined in AHRI 885-2008 Appendix E
 7) Blank spaces indicate Minimum Ps if unit exceeds the ΔPs across the unit
 8) Sound performance based on units lined with standard dual density fiberglass insulation
 9) Discharge (external) static pressure is 0.25" w.g. for all cases

XG-FVI DISCHARGE SOUND - PSC MOTOR - PRIMARY AIR ONLY COOLING

PARALLEL FAN POWERED

XG-FVI-500 VARIABLE VOLUME

OCTAVE BAND SOUND POWER, Lw, dB																							
Case-Inlet Size	CFM	Min ΔPs	ΔPs = 0.50 in. wg.							ΔPs = 1.0 in. wg.							ΔPs = 1.5 in. wg.						
			2	3	4	5	6	7	NC	2	3	4	5	6	7	NC	2	3	4	5	6	7	NC
1-06	300	0.13	56	46	42	36	37	34	<15	61	52	47	45	42	41	<15	62	53	49	47	43	43	17
	350	0.14	57	48	43	37	38	36	<15	62	53	49	46	44	42	<15	62	54	50	47	44	44	17
	400	0.16	58	49	44	38	39	37	<15	62	54	50	46	45	43	<15	62	54	51	48	45	45	17
	450	0.18	59	51	46	39	40	38	<15	63	55	54	51	46	44	<15	63	55	55	51	46	46	18
	500	0.19	60	52	47	41	41	38	<15	64	56	55	53	47	44	16	64	56	56	53	47	46	20
2-08	500	0.12	63	53	46	46	42	39	<15	64	56	48	49	46	43	16	64	57	49	50	47	44	20
	600	0.13	64	55	49	49	44	40	16	65	57	50	51	47	44	16	66	58	51	52	48	44	20
	700	0.15	64	56	51	51	45	40	16	66	58	51	52	48	44	16	67	59	52	53	49	45	20
	800	0.16	64	56	51	51	45	40	16	66	58	51	52	48	44	16	67	59	52	53	49	45	20
	900	0.17	65	58	54	53	46	42	17	66	59	53	54	49	44	16	67	60	53	55	50	46	20
3-10	700	0.12	66	56	50	49	43	42	16	67	60	55	53	51	48	17	68	61	55	54	52	49	21
	900	0.13	67	58	51	51	44	42	17	69	61	56	55	52	49	20	69	62	57	56	53	50	22
	1100	0.16	67	58	51	51	44	42	17	69	61	56	55	52	49	20	69	62	57	56	53	50	22
	1300	0.17	72	60	54	54	47	44	23	70	64	64	58	55	50	21	70	64	63	58	56	50	23
	1500	0.18	73	62	56	56	48	46	25	70	65	63	59	57	51	22	71	65	62	59	57	51	25
4-12	1000	0.10	68	60	53	51	47	43	18	71	64	58	54	49	46	22	72	65	59	55	51	48	26
	1300	0.11	70	62	56	55	50	47	21	73	69	59	57	51	49	25	74	67	60	58	53	51	29
	1600	0.12	74	64	60	58	54	52	26	76	69	62	60	55	53	29	77	69	63	62	56	54	30
	1900	0.13	77	66	63	62	57	55	30	78	71	64	63	58	56	31	79	71	65	63	58	57	32
	2200	0.14	80	67	64	68	62	62	34	81	72	68	67	64	62	35	82	73	69	68	65	63	36
5-14	1300	0.11	62	55	49	47	42	37	<15	69	64	57	57	54	50	21	70	65	59	59	56	51	22
	1700	0.14	67	58	52	51	45	41	17	71	65	58	58	55	51	22	73	66	61	61	57	52	25
	2100	0.16	68	60	54	53	47	43	18	72	66	59	59	56	51	24	73	67	61	61	58	52	25
	2500	0.18	71	60	54	53	48	44	22	72	67	60	60	57	52	25	74	68	63	62	59	53	26
	2900	0.20	73	61	56	55	48	45	25	74	68	61	61	57	52	26	76	69	64	63	59	53	29
6-16	1800	0.12	71	63	56	50	47	45	22	73	65	59	53	52	51	25	74	66	61	55	53	52	26
	2300	0.14	76	67	60	54	52	51	29	78	69	62	58	57	56	31	79	70	64	59	58	57	32
	2800	0.16	77	69	62	57	56	55	30	79	73	67	63	61	59	32	80	74	68	63	61	60	34
	3300	0.18	79	71	64	59	60	59	32	81	76	70	65	65	62	35	83	78	71	66	66	63	38
	3800	0.20	82	73	65	63	61	61	36	84	77	71	67	66	63	39	86	80	72	68	67	64	41
7-16	1800	0.12	70	65	57	56	53	51	22	75	70	61	59	57	55	28	75	70	61	59	57	55	28
	2300	0.13	74	68	59	58	56	54	26	79	74	62	61	59	58	33	79	74	62	61	59	58	33
	2800	0.16	78	71	61	60	59	59	31	81	76	64	62	61	60	35	81	76	64	62	61	60	35
	3300	0.18	79	76	66	66	64	62	35	83	80	78	73	71	70	40	83	80	78	73	71	70	40
	3800	0.20	81	78	68	67	66	64	38	85	82	77	76	74	74	42	85	82	77	76	74	74	42

- AHRI certified data is highlighted while all other data are application ratings
- Radiated sound is the noise transmitted through the unit casing
- Sound power levels expressed in decibels, (dB) re 10⁻¹² Watts
- Min ΔPs is the minimum operating pressure requirement of the unit with the damper full open and is the static pressure drop from the unit inlet to the unit discharge
- Performance data based on laboratory tests conducted in accordance with ASHRAE 130-2016 and AHRI 880-2017
- NC values are calculated using attenuation credits outlined in AHRI 885-2008 Appendix E
- Blank spaces indicate Minimum Ps if unit exceeds the ΔPs across the unit
- Sound performance based on units lined with standard dual density fiberglass insulation
- Discharge (external) static pressure is 0.25" w.g. for all cases
- Discharge sound power levels include duct end reflection corrections per AHRI Standard 880-2017

XG-FVI-500 PSC FAN MOTOR AMPERAGE RATINGS

Case Size	Motor HP	Standard PSC Motor Amperage Ratings		
		120v-1 Phase 60 Hz Rated Amps	208-240v-1 Phase 60 Hz Rated Amps	277v-1 Phase 60 Hz Rated Amps
1	1/8	2.6	0.8	1.1
2	1/6	3.1	0.8	1.1
3	1/4	4.8	1.9	1.9
4	1/4	4.8	1.9	1.9
5	1/3	8.8	3.0	3.6
6	1/2	9.8	3.5	3.9
7	1	N/A	6.2	6.2

XG-FVI-500 ECM FAN MOTOR AMPERAGE RATINGS

Case Size	Motor HP	ECM Motor Amperage Ratings		
		120v-1 Phase 60 Hz Rated Amps	208-240v-1 Phase 60 Hz Rated Amps	277v-1 Phase 60 Hz Rated Amps
1	1/3	4.2	2.7	2.1
2	1/3	4.2	2.7	2.1
3	1/2	6.6	3.8	3.2
4	1/2	6.6	3.8	3.2
5	1	12.0	7.5	6.2
6	1	12.0	7.5	6.2
7	1	12.0	7.5	6.2

XG-FVI-500 DAMPER LEAKAGE

Standard Construction			
Inlet Diameter	Static Pressure " w.g.	Maximum Airflow	Max Damper Leakage
4	3	300	5
5	3	375	5
6	3	540	5
7	3	760	7
8	3	990	9
9	3	1250	12
10	3	1640	16
12	3	2350	22
14	3	3250	32
16	3	4100	41
20	3	6430	64
24	3	7270	72

PERFORMANCE NOTES

- 1) Leakage testing conducted in accordance with ASHRAE 130-2016
- 2) Per ASHRAE Standard 130-2016 "terminal damper leakage: the amount of air in ft³/min (L/s) leaking through a fully closed damper/valve of a supply/exhaust terminal unit at a given inlet pressure"opened"

- 3) Damper leakage shall not exceed 1% of the maximum rated airflow at 3" w.g.
- 4) 4" and 5" inlets are built with 6" casings

XG-FVI-500 HOT WATER COILS MBH SELECTION DATA

Imperial Units				MBH								
Case Size	Rows	Connection OD	GPM	Head Loss (ft-H ₂ O)	CFM							
					200	250	300	350	400	450	500	550
1	One	0.875	1	0.14	10.4	11.6	12.7	13.5	14.3	15.0	15.6	16.2
			2	0.54	11.5	13.0	14.3	15.4	16.5	17.4	18.2	19.0
			4	2.06	12.1	13.8	15.3	16.6	17.8	18.9	20.0	20.9
			6	4.52	12.3	14.1	15.6	17.1	18.4	19.5	20.6	21.6
			Airside Ps		0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.04
1	Two	0.875	1	0.09	14.3	16.2	17.8	19.1	20.3	21.3	22.2	—
			2	0.34	16.2	18.7	20.9	22.9	24.6	26.2	27.6	—
			4	1.32	17.4	20.3	23.0	25.4	27.6	29.6	31.5	—
			6	2.94	17.8	21.0	23.8	26.4	28.8	31.0	33.0	—
			Airside Ps		0.02	0.02	0.03	0.04	0.05	0.06	0.07	—

Case Size	Rows	Connection OD	GPM	Head Loss (ft-H ₂ O)	CFM							
					300	350	400	450	500	600	650	700
2	One	0.875	1	0.14	12.7	13.5	14.3	15.0	15.6	16.7	17.2	17.6
			2	0.54	14.3	15.4	16.5	17.4	18.2	19.7	20.4	21.1
			4	2.06	15.3	16.6	17.8	18.9	20.0	21.8	22.6	23.4
			6	4.52	15.7	17.1	18.4	19.5	20.6	22.6	23.5	24.3
			Airside Ps		0.01	0.02	0.02	0.03	0.03	0.04	0.05	0.06
2	Two	0.875	1	0.09	17.8	19.1	20.3	21.3	22.2	23.7	24.4	—
			2	0.34	20.9	22.9	24.6	26.2	27.6	30.1	31.2	—
			4	1.32	23.0	25.4	27.6	29.6	31.5	34.8	36.3	—
			6	2.94	23.8	26.4	28.8	31.0	33.0	36.8	38.5	—
			Airside Ps		0.03	0.04	0.05	0.06	0.07	0.10	0.11	—

Case Size	Rows	Connection OD	GPM	Head Loss (ft-H ₂ O)	CFM							
					400	500	600	700	800	900	1000	1200
3	One	0.625	1	0.20	16.8	18.4	19.8	20.9	21.9	22.7	23.5	24.8
			2	0.76	19.3	21.5	23.4	25.1	26.6	27.9	29.1	31.1
			4	2.88	20.9	23.5	25.9	27.9	29.8	31.4	33.0	35.7
			6	6.30	21.5	24.3	26.8	29.0	31.1	32.9	34.6	37.5
			Airside Ps		0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.08
3	Two	0.875	1	0.10	22.9	25.3	27.1	28.7	30.0	31.1	32.1	—
			2	0.39	27.7	31.3	34.4	37.1	39.4	41.4	43.3	—
			4	1.51	30.9	35.6	39.7	43.3	46.6	49.6	52.3	—
			6	3.36	32.1	37.2	41.8	45.9	49.7	53.1	56.2	—
			Airside Ps		0.03	0.04	0.05	0.07	0.09	0.10	0.12	—

Case Size	Rows	Connection OD	GPM	Head Loss (ft-H ₂ O)	CFM							
					800	900	1000	1100	1200	1300	1400	1600
4	One	0.625	1	0.20	21.9	22.7	23.5	24.2	24.8	25.3	25.9	26.7
			2	0.76	26.6	27.9	29.1	30.1	31.1	32.0	32.9	34.4
			4	2.88	29.8	31.4	33.0	34.4	35.7	36.9	38.0	40.1
			6	6.31	31.1	32.9	34.6	36.1	37.5	38.9	40.2	42.5
			Airside Ps		0.04	0.05	0.06	0.07	0.08	0.09	0.1	0.13
4	Two	0.875	1	0.10	30.0	31.1	32.1	32.9	33.6	34.3	34.9	—
			2	0.39	39.4	41.4	43.3	44.9	46.4	47.7	49.0	—
			4	1.52	46.6	49.6	52.3	54.8	57.1	59.2	61.2	—
			6	3.36	49.7	53.1	56.2	59.1	61.8	64.3	66.7	—
			Airside Ps		0.09	0.10	0.12	0.15	0.17	0.19	0.22	—

- 1) All coil performance in accordance with AHRI Standard 410-2001
- 2) Heating capacities are in MBH
- 3) Performance data based on a temperature differential of 115°F (180°F entering water temperature and 65°F entering air temperature)
- 4) For temperature differentials other than 115°F, multiply the MBH by the correction factors below
- 5) Head Loss is in feet of water
- 6) Airside ΔPs is the air pressure drop of the hot water coil
- 7) Air temperature rise = 927 x MBH/CFM
- 8) Water temperature drop = 2.04 x MBH/GPM
- 9) Values in tables are listed for 0 ft. of altitude and no glycol in the system

MBH CORRECTION FACTORS

ΔT	50	60	70	80	90	100	115	125	140	150
Factor	0.44	0.52	0.61	0.70	0.79	0.88	1.00	1.07	1.20	1.30

XG-FVI-500 HOT WATER COILS MBH SELECTION DATA

Case Size	Rows	Connection OD	GPM	Head Loss (ft-H ₂ O)	CFM							
					1000	1100	1200	1300	1400	1500	1600	1700
5	One	0.625	1	0.20	23.5	24.2	24.8	25.3	25.9	26.3	26.7	27.1
			2	0.76	29.1	30.1	31.1	32.0	32.9	33.6	34.4	35.0
			4	2.89	33.0	34.4	35.7	36.9	38.0	39.1	40.1	41.0
			6	6.32	34.6	36.1	37.5	38.9	40.2	41.4	42.5	43.6
			Airside Ps		0.06	0.07	0.08	0.09	0.1	0.11	0.13	0.14
5	Two	0.875	1	0.10	32.1	32.9	33.6	34.3	34.9	35.4	35.9	—
			2	0.39	43.3	44.9	46.4	47.7	49.0	50.1	51.2	—
			4	1.52	52.3	54.7	57.1	59.2	61.2	63.0	64.7	—
			6	3.36	56.2	59.1	61.8	64.3	66.7	68.9	71.0	—
			Airside Ps		0.12	0.15	0.17	0.19	0.22	0.24	0.27	—

Case Size	Rows	Connection OD	GPM	Head Loss (ft-H ₂ O)	CFM							
					1000	1100	1200	1300	1400	1600	1800	2000
6	One	0.625	1	0.21	24.5	25.2	25.9	26.4	27.0	27.9	28.7	29.4
			2	0.81	30.4	31.5	32.5	33.5	34.4	36.0	37.4	38.7
			4	3.07	34.5	36.0	37.4	38.7	39.9	42.1	44.0	45.8
			6	6.72	36.2	37.8	39.3	40.8	42.1	44.6	46.8	48.9
			Airside Ps		0.05	0.06	0.07	0.07	0.09	0.11	0.13	0.16
6	Two	0.875	1	0.10	33.1	34.0	34.8	35.4	36.1	37.1	38.0	—
			2	0.40	44.8	46.5	48.1	49.5	50.8	53.1	55.1	—
			4	1.57	54.1	56.7	59.2	61.4	63.5	67.3	70.7	—
			6	3.47	58.2	61.3	64.1	66.8	69.3	73.9	78.0	—
			Airside Ps		0.11	0.12	0.14	0.16	0.19	0.23	0.28	—

Case Size	Rows	Connection OD	GPM	Head Loss (ft-H ₂ O)	CFM							
					2000	2100	2200	2300	2400	2600	2800	3000
7	One	0.875	2	0.34	43.8	44.5	45.1	45.7	46.2	47.2	48.1	49.0
			4	1.32	54.0	55.0	55.9	56.8	57.7	59.3	60.9	62.3
			6	2.94	58.6	59.7	60.9	61.9	63.0	65.0	66.8	68.5
			8	5.19	61.2	62.5	63.7	64.9	66.0	68.2	70.3	72.2
			Airside Ps		0.07	0.08	0.09	0.09	0.1	0.11	0.13	0.15
7	Two	0.875	2	0.26	63.3	64.2	65.0	65.8	66.5	67.9	69.1	—
			4	1.01	84.3	86.0	87.5	89.0	90.4	93.1	95.5	—
			6	2.24	94.6	96.7	98.8	100.7	102.5	106.0	109.3	—
			8	3.97	100.7	103.2	105.5	107.7	109.9	113.9	117.7	—
			Airside Ps		0.16	0.17	0.19	0.20	0.22	0.25	0.28	—

Heating capacity data in tables assume an entering water temperature (EWT) of 180°F, and an entering air temperature (EAT) of 65°F, which corresponds to a temperature difference of 115°F. Smaller temperature differences will result in a decrease of heating capacity. To obtain the heating capacity at another temperature difference, refer to the hot water coil notes located in the Reference Section.

- 1) All coil performance in accordance with AHRI Standard 410-2001
- 2) Heating capacities are in MBH
- 3) Performance data based on a temperature differential of 115°F (180°F entering water temperature and 65°F entering air temperature)
- 4) For temperature differentials other than 115°F, multiply the MBH by the correction factors below
- 5) Head Loss is in feet of water
- 6) Airside ΔPs is the air pressure drop of the hot water coil
- 7) Aire temperature rise = 927 x MBH/CFM
- 8) Water temperature drop = 2.04 x MBH/GPM
- 9) Values in tables are listed for 0 ft. of altitude and no glycol in the system

MBH CORRECTION FACTORS

ΔT	50	60	70	80	90	100	115	125	140	150
Factor	0.44	0.52	0.61	0.70	0.79	0.88	1.00	1.07	1.20	1.30

XG-FVI-500 ELECTRIC HEATER CAPACITIES

Single Phase XG-FVI kW Limits				
Case Size	Heater Voltage	Min. kW per Step	Max. kW	Max. Steps
1	120	0.5	5	2
1	208	0.5	8.5	2
1	240	0.5	10	2
1	277	0.5	11.5	2
1	480	0.5	11.5	2
2	120	0.5	5	2
2	208	0.5	8.5	2
2	240	0.5	10	2
2	277	0.5	11.5	2
2	480	0.5	11.5	2
3	120	0.5	5	3
3	208	0.5	8.5	3
3	240	0.5	10	3
3	277	0.5	11.5	3
3	480	1.0	11.5	3
4	120	0.5	5	3
4	208	0.5	8.5	3
4	240	0.5	10	3
4	277	0.5	11.5	3
4	480	0.5	17	3

Single Phase XG-FVI kW Limits				
Case Size	Heater Voltage	Min. kW per Step	Max. kW	Max. Steps
5	120	0.5	5	3
5	208	0.5	8.5	3
5	277	0.5	11.5	3
5	480	0.5	17	3
6	120	0.5	5	3
6	208	0.5	8.5	3
6	277	0.5	11.5	3
6	480	0.5	17	3
7	120	0.5	5	3
7	208	0.5	8.5	3
7	277	0.5	11.5	3
7	480	0.5	17	3

NOTES:

1. Heaters equal to or less than 10 kW are specifiable to nearest 0.5 kW. Heaters greater than 5 kW and less than 10 kW are specifiable to nearest 0.5 kW.
2. Minimum flow rate for electric heat is 70 CFM / kW.
Lower CFM's can cause nuisance tripping, excessive discharge temperatures, rapid cycling, and rapid element failure. Electric Heat units running below 70 CFM / kW will void all warranties.
3. For optimum thermal comfort, the suggested discharge temperature should not exceed 20°F above room set point.
4. We do not recommend discharge temperatures in excess of 115°F to protect heater coils.
5. Maximum number of steps at minimum kW per step is one step.
6. If more than 1 heater is wired into a building's circuit breaker (multi-outlet branch circuit) each heater will require the addition of power side fusing.

ELECTRIC HEAT SELECTION:

A. Specify electric duct heaters using voltage, phase, kW, and number of steps.

B. Use above chart to select voltage. Calculate required kW using following equations:

$$kW = \frac{BTU / HR}{3413} \quad kW = \frac{CFM \times \Delta \times 1.085}{3413} \quad \Delta = \frac{kW \times 3413}{CFM \times 1.085}$$

$$CFM = \frac{kW \times 3413}{\Delta \times 1.085} \quad CFM = \frac{kW \times 3413}{\Delta \times 1.085}$$

* air density at sea level — reduce by 0.036 for each 1000 feet of altitude above sea level

Where: BTU / Hr = Required heating capacity

CFM = volume of air during heating. Typically 100% of maximum cooling air volume

Δ = desired air temperature rise across the electric heater

Inlet air temperature = primary air temperature, usually 55°F

XG-FVI-500 ELECTRIC HEATER CAPACITIES

Three Phase XG-FVI kW Limits				
Case Size	Heater Voltage	Min. kW per Step	Max. kW	Max. Steps
1	208	0.5	13	2
1	480	10.5	17	2
2	208	0.5	13	2
2	480	1.5	17	2
3	208	0.5	13	3
3	480	1.5	17	3
4	208	0.5	13	3
4	480	1.5	25	3

Three Phase XG-FVI kW Limits				
Case Size	Heater Voltage	Min. kW per Step	Max. kW	Max. Steps
5	208	0.5	13	3
5	480	1.5	25	3
6	208	0.5	13	3
6	480	1.5	25	3
7	208	0.5	13	3
7	480	1.5	25	3

NOTES:

1. Heaters less than 10 kW are specifiable to nearest 0.5 kW. Heaters greater than 10.0 kW are specifiable to nearest 1.0 kW.
2. Minimum flow rate for electric heat is 70 CFM / kW.
Lower CFM's can cause nuisance tripping, excessive discharge temperatures, rapid cycling, and rapid element failure.
Electric Heat units running below 70 CFM / kW will void all warranties.
3. For optimum thermal comfort, the suggested discharge temperature should not exceed 20°F above room set point.
4. We do not recommend discharge temperatures in excess of 115°F to protect heater coils.
5. Maximum number of steps at minimum kW per step is one step.
6. If more than 1 heater is wired into a building's circuit breaker (multi-outlet branch circuit) each heater will require the addition of power side fusing.

ELECTRIC HEAT SELECTION:

- A. Specify electric duct heaters using voltage, phase, kW, and number of steps.
- B. Use above chart to select voltage. Calculate required kW using following equations:

$$kW = \frac{BTU / HR}{3413} \quad kW = \frac{CFM \times \Delta \times 1.085}{3413} \quad \Delta = \frac{kW \times 3413}{CFM \times 1.085}$$

$$CFM = \frac{kW \times 3413}{\Delta \times 1.085} \quad CFM = \frac{kW \times 3413}{\Delta \times 1.085}$$

* air density at sea level — reduce by 0.036 for each 1000 feet of altitude above sea level

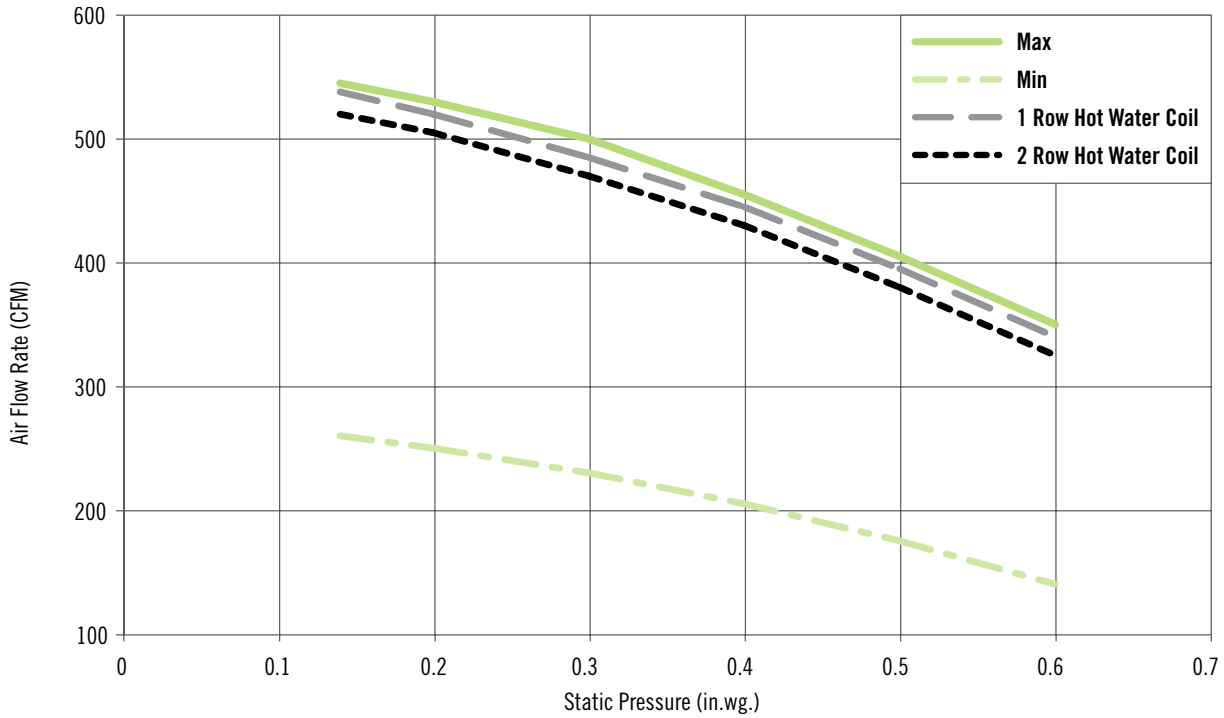
Where: BTU / Hr = Required heating capacity

CFM = volume of air during heating. Typically 100% of maximum cooling air volume

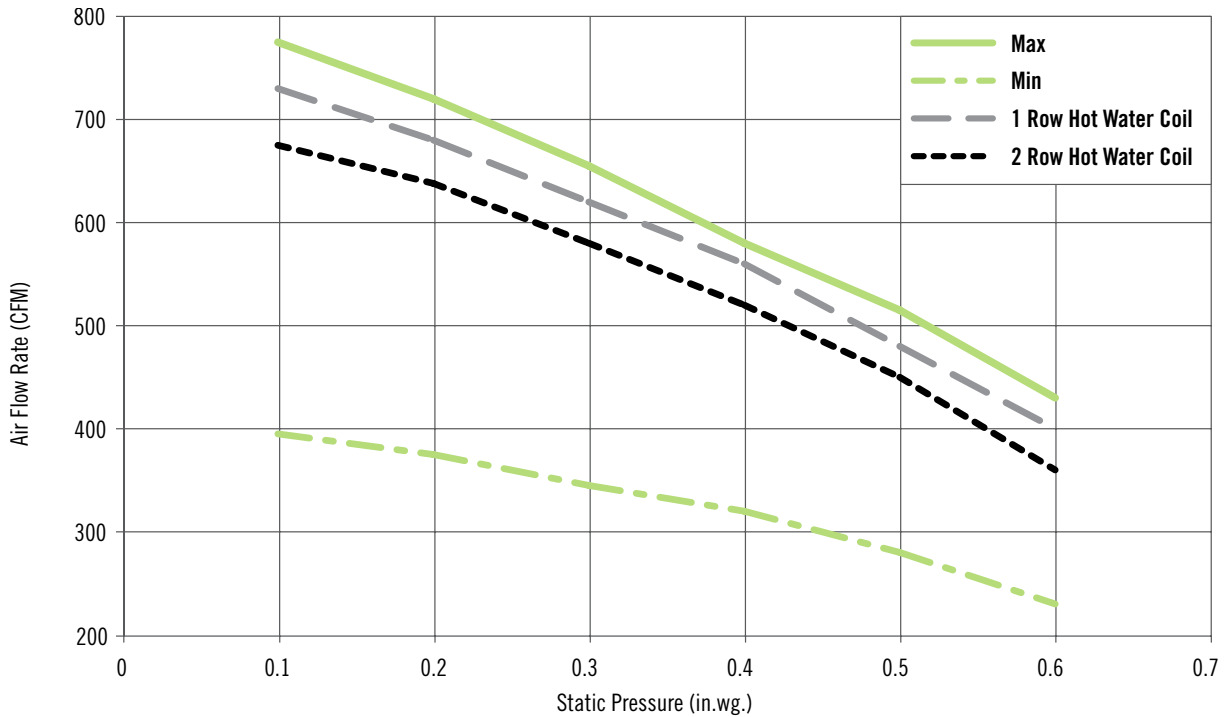
Δ = desired air temperature rise across the electric heater

Inlet air temperature = primary air temperature, usually 55°F

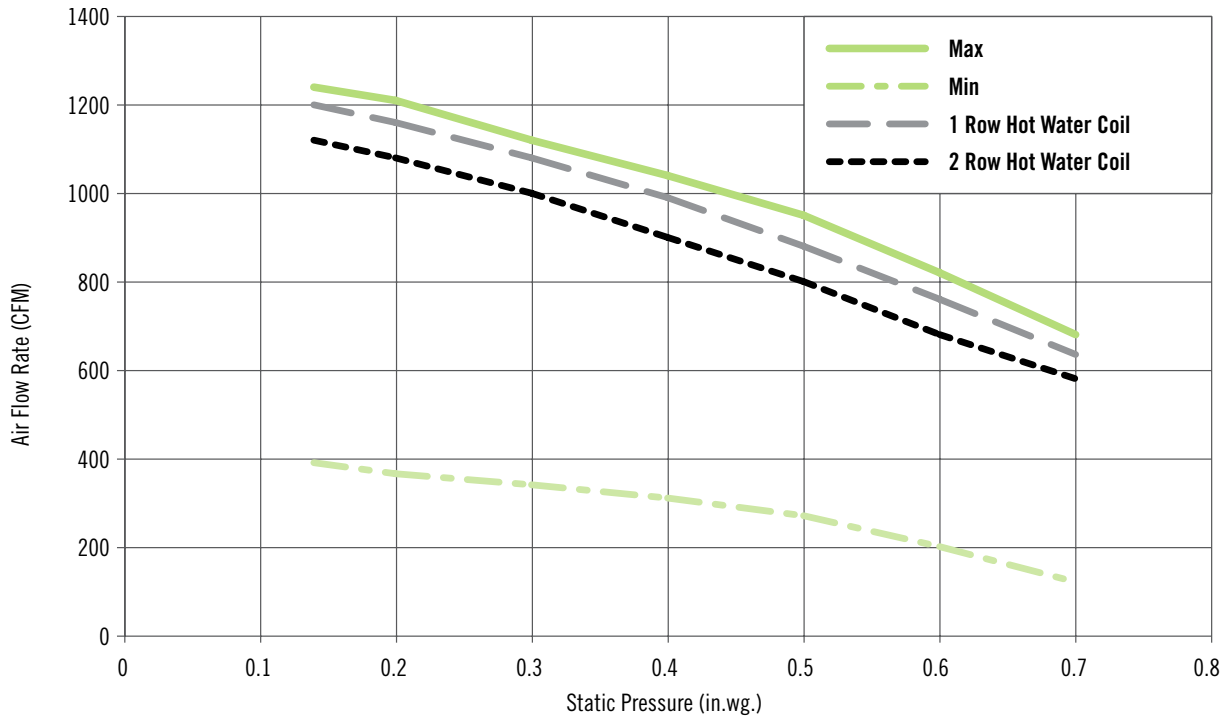
**XG-FVI-500 FAN PERFORMANCE CURVES
UNIT SIZE 1 - STANDARD HW COIL**



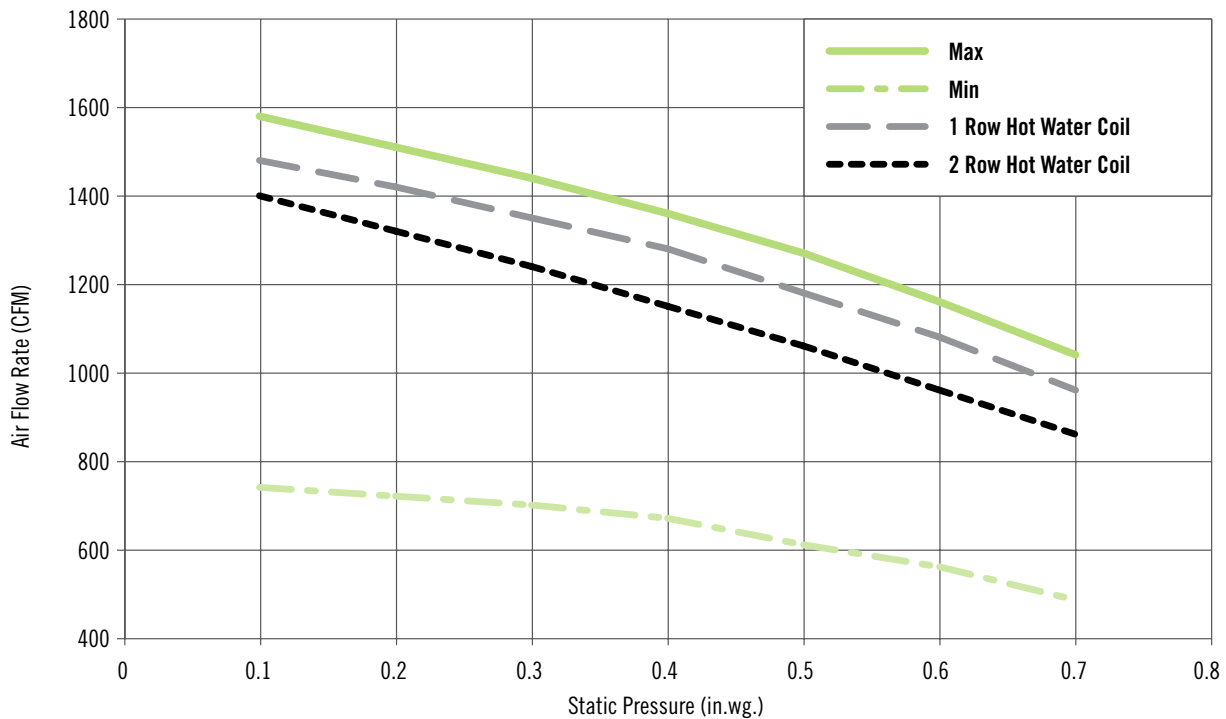
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UNIT SIZE 2 - STANDARD HW COIL**



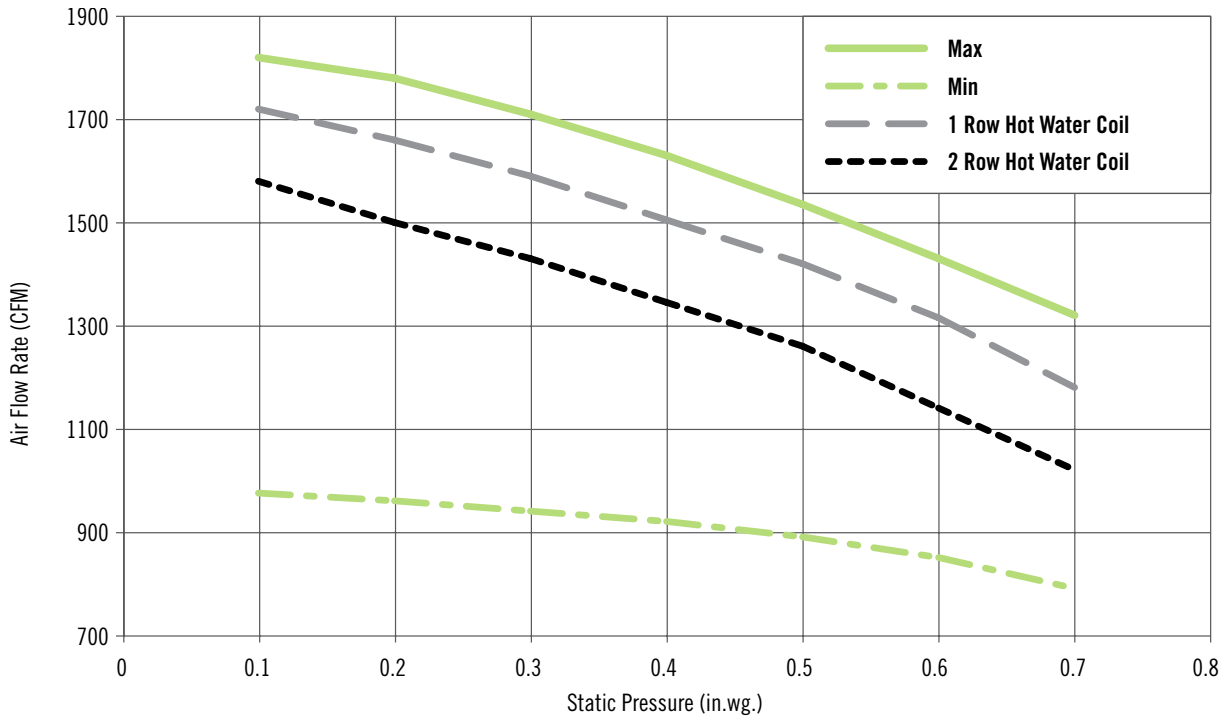
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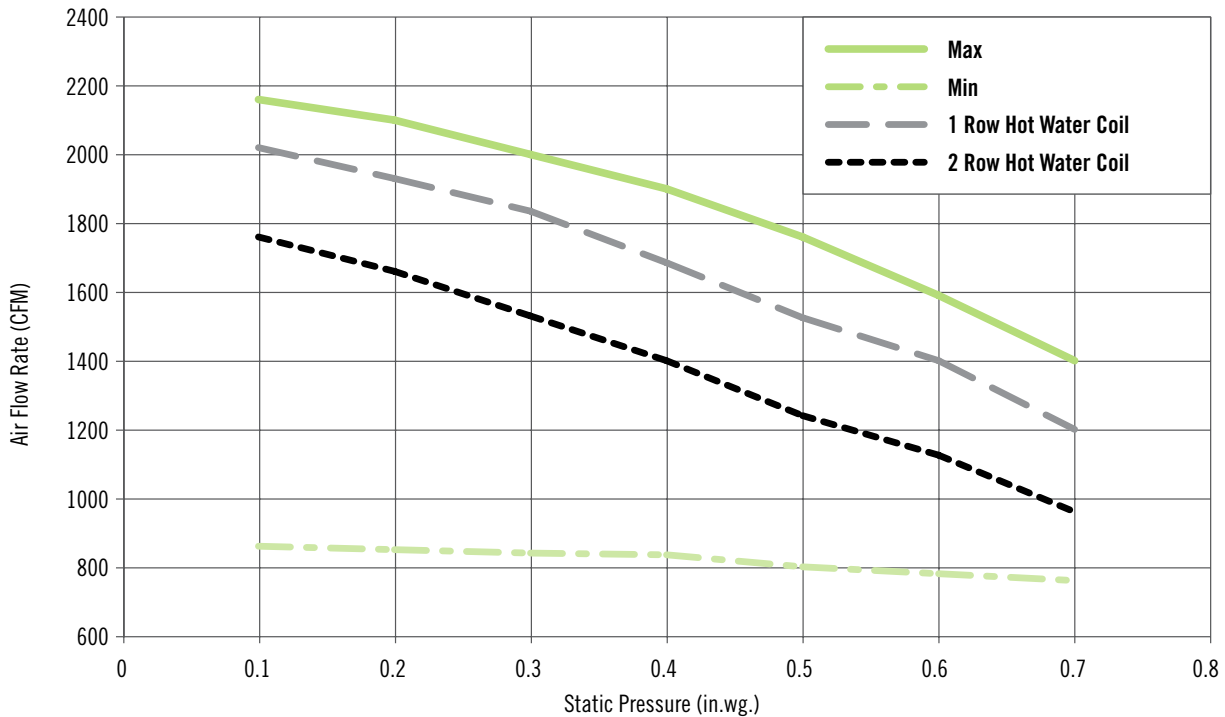
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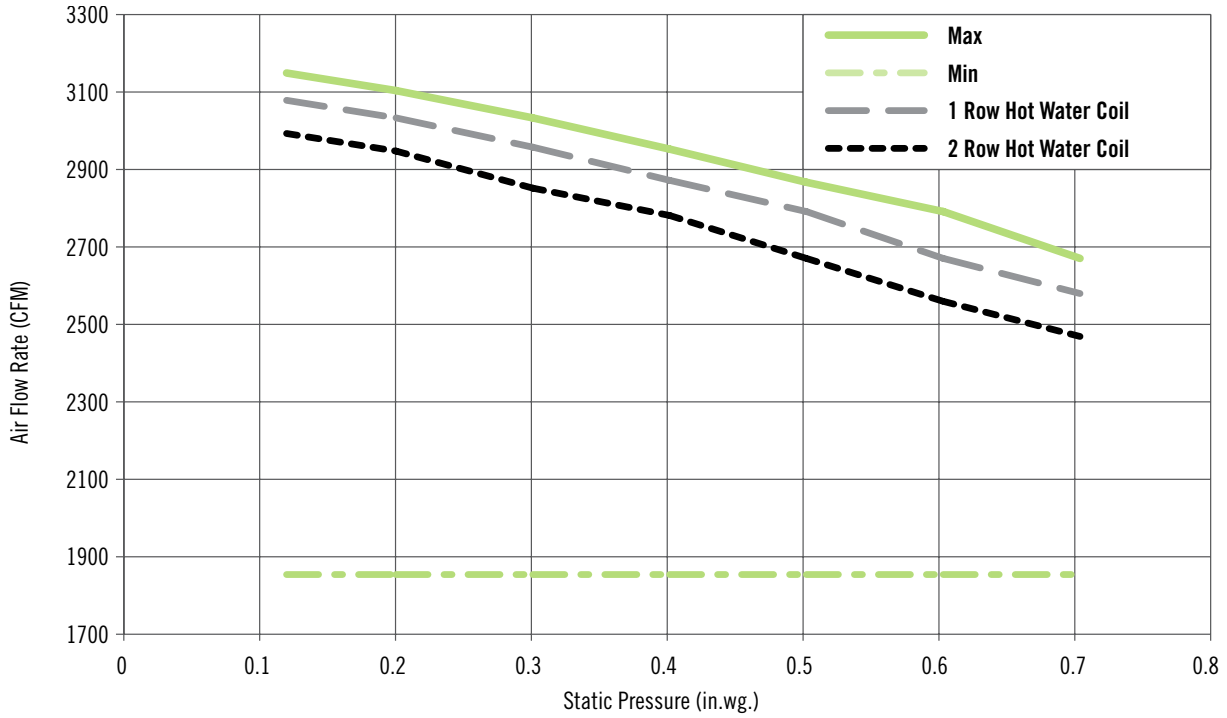
**XG-FVI-500 FAN PERFORMANCE CURVES
UNIT SIZE 5 - STANDARD HW COIL**



**XG-FVI-500 FAN PERFORMANCE CURVES
UNIT SIZE 6 - STANDARD HW COIL**



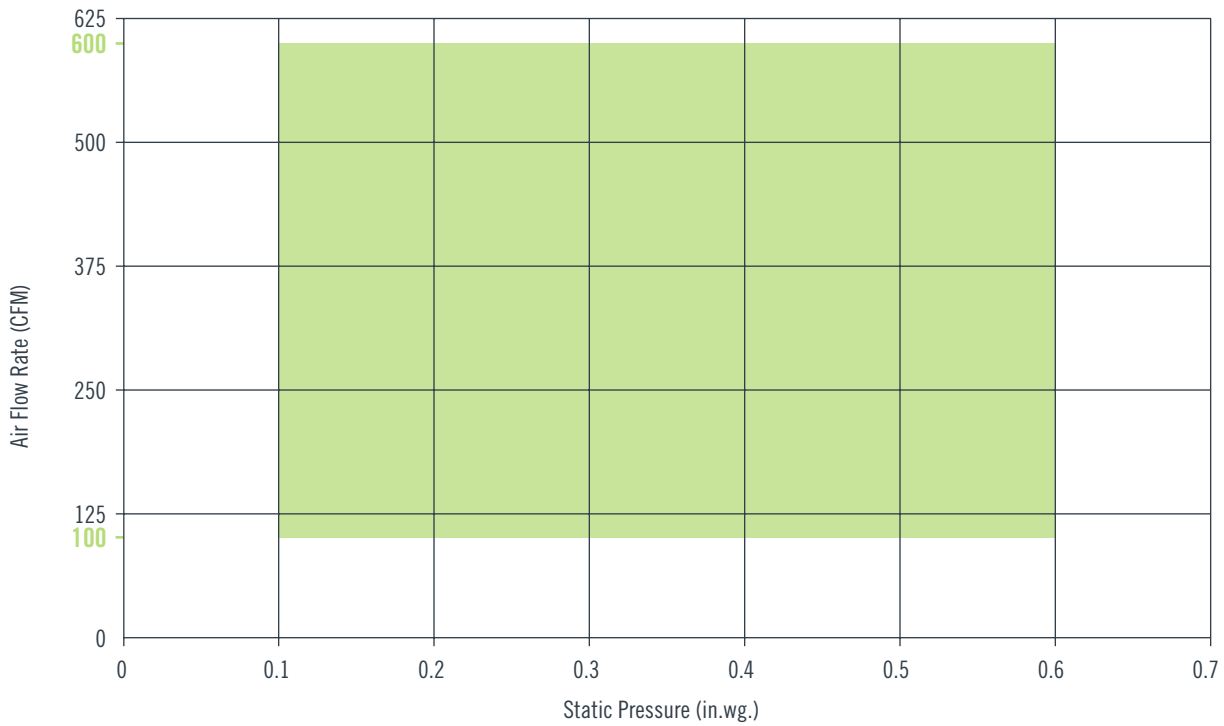
**XG-FVI-500 FAN PERFORMANCE CURVES
UNIT SIZE 7 - STANDARD HW COIL**



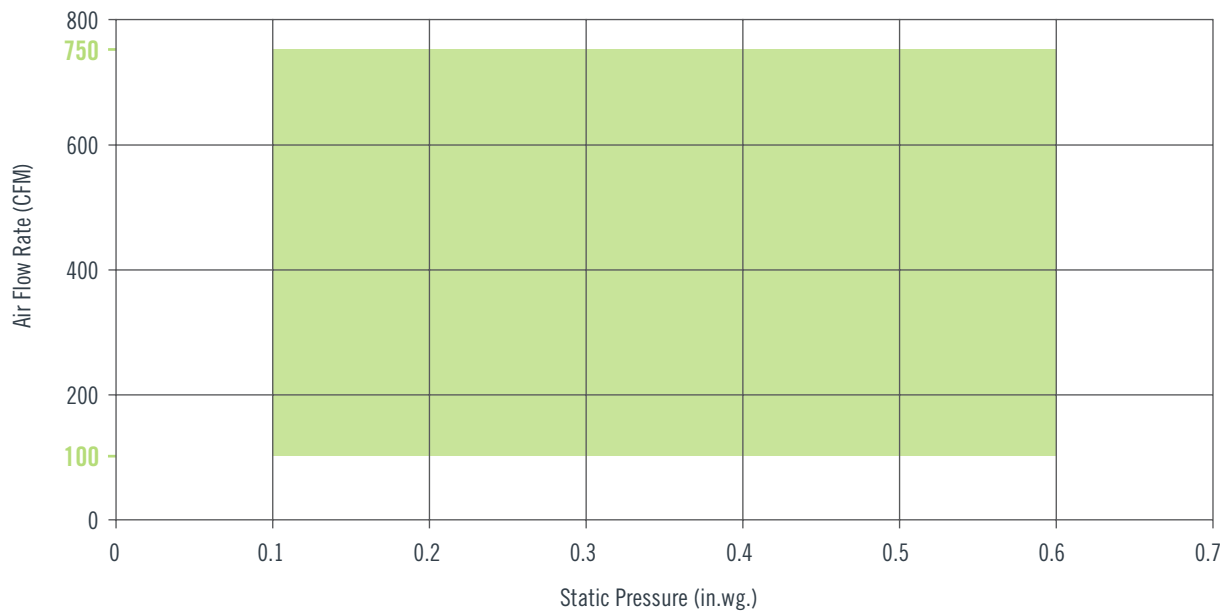
PARALLEL FAN POWERED

XG-FVI-500 VARIABLE VOLUME

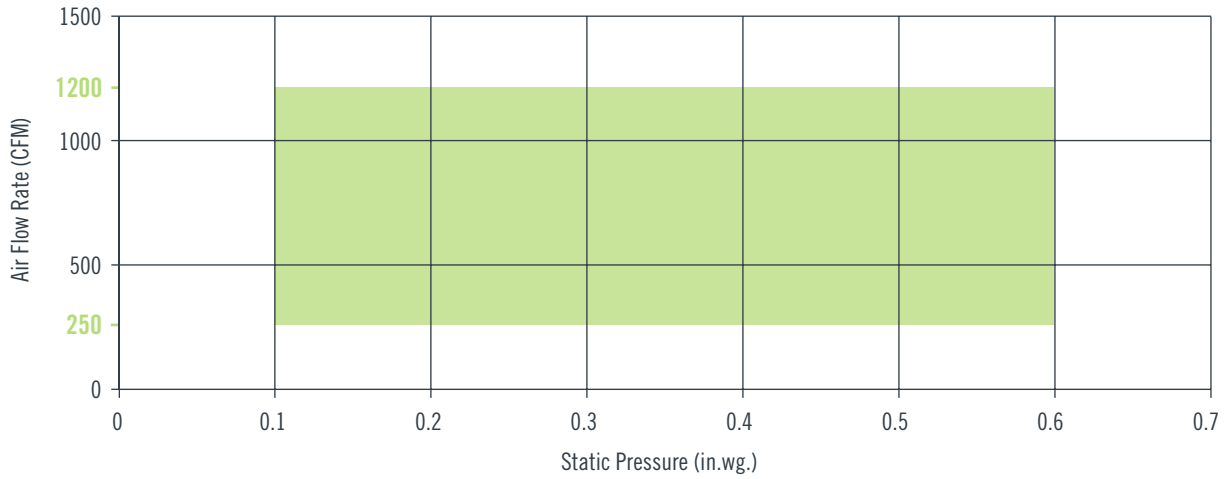
XG-FVI-500 ECM FAN PERFORMANCE CURVES UNIT SIZE 1 - STANDARD HW COIL



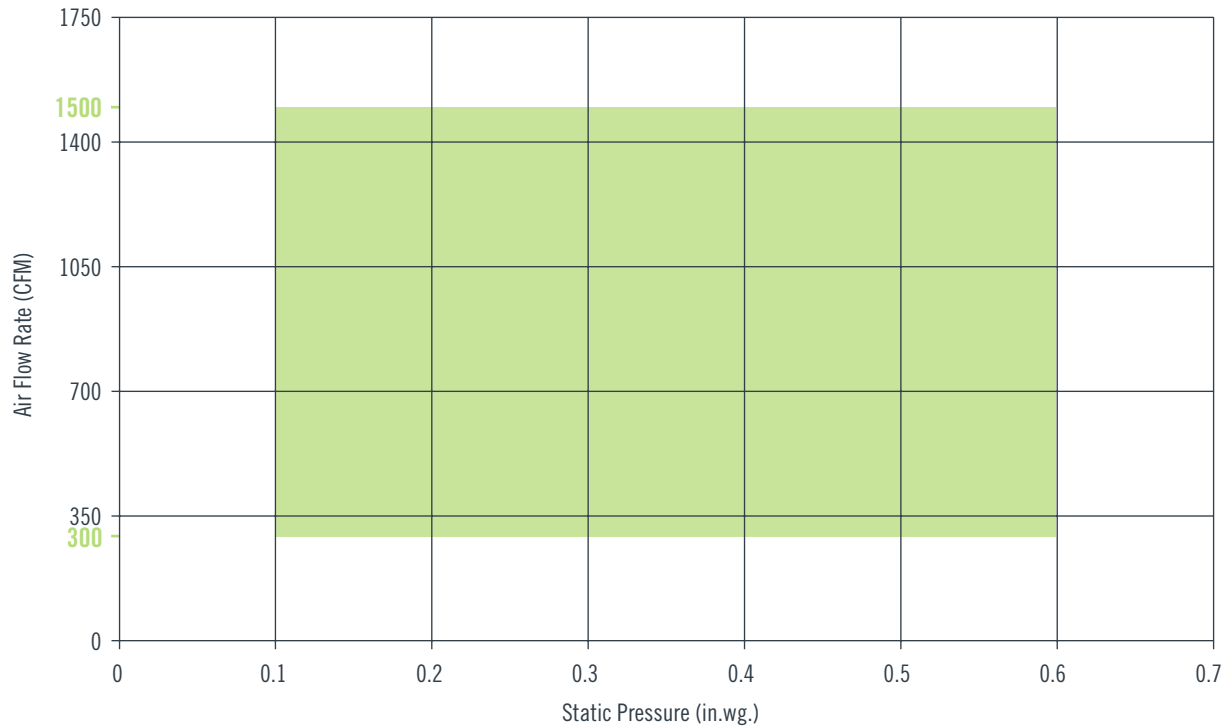
XG-FVI-500 ECM FAN PERFORMANCE CURVES UNIT SIZE 2 - STANDARD HW COIL



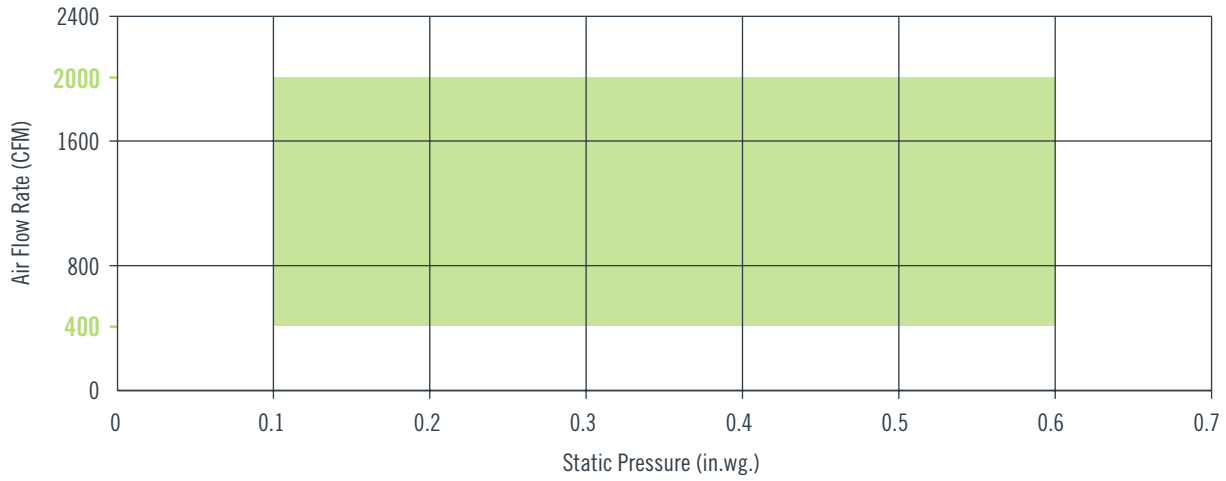
XG-FVI-500 ECM FAN PERFORMANCE CURVES UNIT SIZE 3 - STANDARD HW COIL



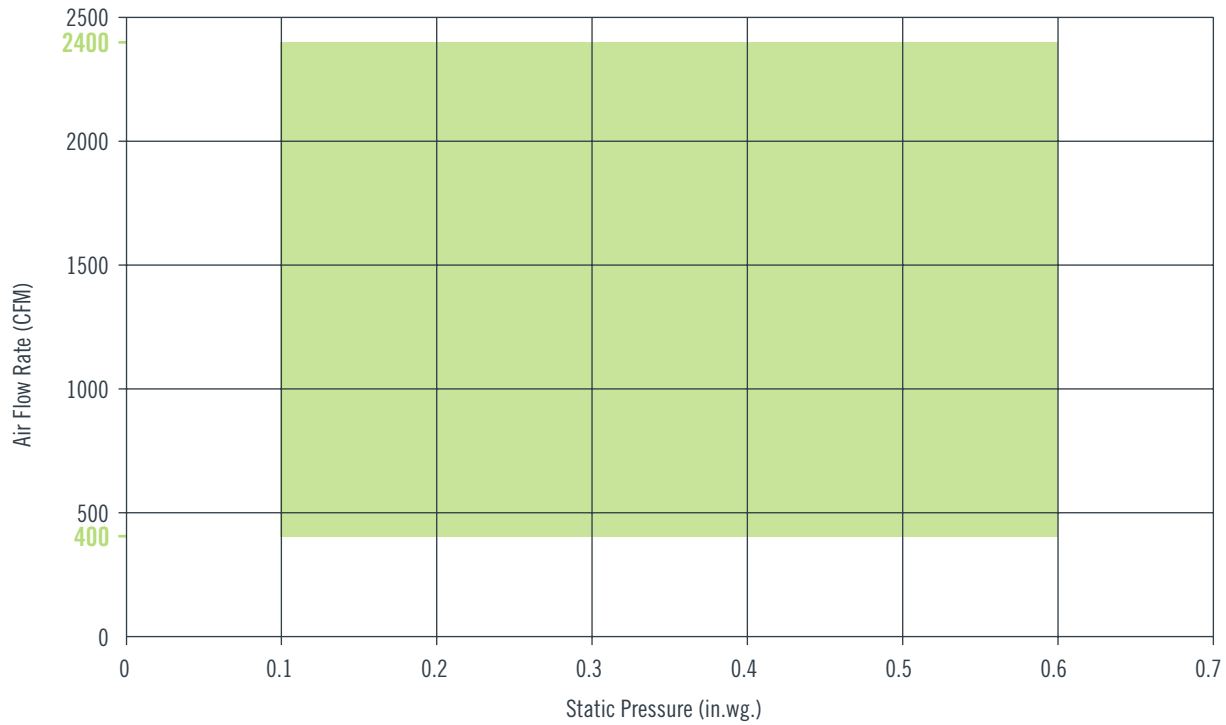
XG-FVI-500 ECM FAN PERFORMANCE CURVES UNIT SIZE 4 - STANDARD HW COIL



XG-FVI-500 ECM FAN PERFORMANCE CURVES UNIT SIZE 5 - STANDARD HW COIL



XG-FVI-500 ECM FAN PERFORMANCE CURVES UNIT SIZE 6 - STANDARD HW COIL



XG-FVI-500 ECM FAN PERFORMANCE CURVES UNIT SIZE 7 - STANDARD HW COIL

